

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1. (Currently amended) A lithium ion secondary battery comprising:

a positive electrode for absorbing and desorbing lithium ion;

a negative electrode for absorbing and desorbing lithium ion;

a porous film interposed between said positive electrode and said negative electrode, the porous film having a thickness of 0.5 to 20 μm ;

a sheet separator interposed between said positive electrode and said porous film, the sheet separator having a thickness of 8 to 25 μm and being made of a polyolefin resin; and

a non-aqueous electrolyte;

wherein said porous film is adhered to a surface of at least said negative electrode,

a total thickness of said sheet separator and said porous film is 15 to 30 μm ,

said porous film comprises an inorganic filler and a first binder, a content of said first binder in said porous film being 1.5 to 8 parts by weight per 100 parts by weight of said filler,

said first binder comprises core-shell type particles of acrylonitrile-acrylate copolymer having a polyacrylonitrile chain as a first rubber, said first rubber being water-insoluble and having a decomposition temperature of 250°C or higher,

said negative electrode comprises a negative electrode active material for absorbing and desorbing lithium ion and a second binder,

said second binder includes a second rubber particle comprising a polymer including a styrene unit and a butadiene unit, and a water-soluble polymer comprising a polymer including a methylcellulose unit, and

a content of said second binder in said negative electrode is 1.5 to 3 parts by weight per 100 parts by weight of said negative electrode active material.

2. (Original) The lithium ion secondary battery in accordance with claim 1, wherein said first rubber has a crystalline melting point of 250 °C or more.

3-7. (Cancelled)

8. (Original) The lithium ion secondary battery in accordance with claim 1, wherein said inorganic filler comprises an inorganic oxide.

9. (Previously presented) The lithium ion secondary battery in accordance with claim 8, wherein a surface of said inorganic oxide is alkaline and has a BET specific surface area of 0.9 m²/g or more.

10. (Original) The lithium ion secondary battery in accordance with claim 1, wherein said inorganic oxide includes at least one selected from the group consisting of alumina and titanium oxide.

11. (Original) The lithium ion secondary battery in accordance with claim 1, wherein a surface roughness of said porous film is less than a surface roughness of an electrode surface to which said porous film is adhered to.

12. (Original) The lithium ion secondary battery in accordance with claim 1, wherein said inorganic filler comprises a mixture of a large particle group and a small particle group, and

an average particle size A of said large particle group and an average particle size B of said small particle group satisfy the formula (1):

$$0.05 \leq B/A \leq 0.25.$$

13. (Original) The lithium ion secondary battery in accordance with claim 1, wherein said positive electrode and said negative electrode are wound with said porous film interposed therebetween.

14-16. (Cancelled)

17. (Previously presented) The lithium ion secondary battery in accordance with claim 1, wherein a surface of said inorganic filler is alkaline.

18. (Previously Presented) The lithium ion secondary battery in accordance with claim 1, wherein the acrylate of the core-shell type particles forms an acidic adhesive surface portion on a surface of the core-shell type particles.